



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

NOV 14 2019

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Article Number: 7018 0680 0001 1658 9916

Todd Furnia, Environmental Manager
Arconic Inc., Massena Operations
P.O. Box 150
Massena, NY 13662

**Re: EPA Compliance Sampling Inspection September 10 and 11, 2019
Arconic Inc. – Massena Operations (West Plant)
SPDES Permit No: NY0001732**

Dear Mr. Furnia:

Representatives from the United States Environmental Protection Agency (“EPA”) Region 2 conducted a Compliance Sampling Inspection (“CSI”) at the subject Facility on September 10 and 11, 2019. The purpose of the CSI was to evaluate compliance with the effluent limitations contained in your individual State Pollutant Discharge Elimination System (“SPDES”) Permit NY0001732 (“Individual Permit”) at Outfalls 01A, 001, 003, and 004 only (and outfall 008 did not have a discharge at the time of the inspection). This inspection did not include sampling at any other Arconic outfalls, a facility site review, nor a records review.

Should you have any questions regarding this letter, feel free to contact me at (212) 637-4268 or contact Mr. Murray Lantner, P.E. of my staff at (212) 637-3976 (lantner.murray@epa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Justine Modigliani".

Justine Modigliani, P.E., Chief
CWA Compliance Section

Enclosure – EPA Compliance Sampling Inspection Report Sept. 10 and 11, 2019

cc: Ed Hampston Director, Bureau of Water Compliance Programs, NYSDEC
(w/enclosure)
David Rarick, P.E., Regional Water Engineer, NYSDEC Region 6 via email
david.rarick@dec.ny.gov

Internet Address (URL) ☐ <http://www.epa.gov>

Recycled/Recyclable • Printed with Vegetable Oil Based Inks on Recycled Paper (Minimum 30% Postconsumer)



NPDES Compliance Sampling Inspection Report

Arconic Inc. – Massena Operations

Massena, New York

NY0001732


September 10-11, 2019

Report Prepared by:


Robert Morrell, Geologist

Date: 10/17/19

Report Approved by:


Darvene Adams, Chief
Monitoring Operations Section

Date: 10/21/19

1.0 OBJECTIVE

On September 10-11, 2019, at the request of the Water Compliance Branch, the United States Environmental Protection Agency (USEPA) conducted a National Pollutant Discharge Elimination System (NPDES) Compliance Sampling Inspection (CSI) at the Arconic Inc. – Massena Operations facility in Massena, New York. The objective of the CSI was to gather information necessary to determine compliance with the requirements and limitations of SPDES Permit No. NY0001732.

2.0 KEY PARTICIPANTS

Listed below are key inspection participants and contact information, grouped by organization.

U.S. Environmental Protection Agency
Robert Morrell, Geologist, Lead Inspector
Morrell.robert@epa.gov, 732-906-6804
Kathleen Foley, Physical Scientist
Savino.kathleen@epa.gov, 732-321-6790

CDM Smith
Garrett Richards, Environmental Engineer

Arconic Inc. – Massena Operations
Nicole Polarolo, EHS Engineer
Nicole.polarolo@arconic.com, 315-323-1789
Todd Furnia, Environmental and Security Manager
Todd.furnia@arconic.com, 315-764-4916
Tim Long, Staff Environmental Engineer
Tim.long@arconic.com, 315-764-4914

3.0 FACILITY DESCRIPTION

3.1 General Information

Arconic Inc.–Massena Operations is located on Park Avenue East in Massena, New York. Aluminum manufacturing operations began at the site in 1902. The 1700-acre site was owned and operated by Alcoa Inc. until 2016, when the business was restructured and Arconic Inc. assumed ownership of the site. Alcoa Inc. is a leaseholder and is responsible for all the aluminum smelting operations. Arconic receives aluminum from Alcoa and oversees the finishing operations. Arconic is responsible for monitoring and compliance with the SPDES permitted outfalls, including those that receive wastewater from Alcoa operations. There are 144 Arconic employees and 425 Alcoa employees. The facilities operate 24 hours per day, 7 days per week.

3.2 Process Information

In the smelting process, alumina is converted to aluminum using electrolytic reduction. Alumina is dissolved in a cryolite bath inside a carbon-lined pot. When an electric current is passed through the bath, the alumina is reduced to aluminum and the molten aluminum separates from the solution.

Molten aluminum from the smelter is mixed with other alloying metals in a furnace and cast into molds or ingots. The aluminum alloys can then be used to produce wire, rod, or bar in the extrusion process.

3.3 Water and Wastewater

Process water is obtained from an intake on the St. Lawrence River. Approximately 2 million gallons per day (mgd) are treated and used throughout the facility for contact and non-contact cooling water, rinses, boiler feed water, and sanitary water. Wastewater from various industrial processes, treatment systems, and stormwater runoff is discharged through several outfalls:

Outfall 001 – Consists of stormwater runoff from the remediated 60-acre lagoon and flows from internal Outfalls 01A, 01D, and 01E. The effluent is discharged to the Grasse River.

Outfall 01A – This internal outfall consists of Central Impoundment effluent, Area III Impoundment effluent, non-contact cooling water, boiler blowdown, and stormwater. The combined wastewater flows through a treatment system which includes a settling basin for precipitation of solids, dual media filtration, and carbon adsorption. The effluent is discharged to Outfall 001.

Outfall 01D – This internal outfall consists of treated sanitary wastewater, non-contact cooling water, landfill leachate, and Outfall 01B treatment system effluent. The effluent is discharged to Outfall 001.

Outfall 01E – This internal outfall consists of treated contact cooling water from ingot casting. The effluent is discharged to Outfall 001.

Outfall 01G – This internal outfall consists of contact and non-contact cooling water from Area I heat treat. The effluent is discharged to Outfall 004.

Outfall 01H – This internal outfall consists of extrusion core wastewater and solution heat treat wastewater. The effluent is discharged to Outfalls 01A and 001.

Outfall 003 – Consists of Building 401 underdrain groundwater and Area III stormwater runoff. The effluent is discharged to the Massena Power Canal.

Outfall 004 – Consists of stormwater runoff from Areas I and II, and effluent from internal Outfall 01G. The combined wastewater flows through a treatment system that includes a settling basin, dual media filtration, and carbon adsorption. The effluent is discharged to the Grasse River.

Outfall 008 – Consists of non-industrial stormwater runoff. The effluent is discharged to Robinson Creek.

4.0 EPA SAMPLING/INSPECTION ACTIVITIES

4.1 Sampling Activities

EPA personnel collected samples from the main outfalls that discharge to receiving waters: Outfalls 001, 003 and 004. In addition, samples were collected from internal Outfall 01A. Samples were not collected at Outfall 008 because there was no flow on the days of the sampling inspection.

Outfall 001: An automatic composite sampler was set up at Outfall 001 to collect an aliquot of the effluent wastewater every 15 minutes for 4 hours. The composite sample container was packed in ice. The 4-hour composite sample was analyzed for total suspended solids (TSS), total dissolved solids (TDS), fluoride, and metals (aluminum, boron, copper, iron, nickel, and zinc). Using a rod and clamp, a 3-grab composite sample was collected for the analysis of non-volatile organics (PAH's). A grab sample was also collected for oil and grease, cyanide, volatile organics, and PCB's. Total residual chlorine, pH, temperature, and settleable solids were analyzed in the field and recorded in the field notebook. The flow was recorded from the flow meter totalizer.

Outfall 01A: An automatic composite sampler was set up at Outfall 01A to collect an aliquot of the effluent wastewater every 15 minutes for 4 hours. The composite sample container was packed in ice. The 4-hour composite sample was analyzed for TSS, TDS, and fluoride. A 3-grab composite sample was collected for the analysis of non-volatile organics (PAH's). A grab sample was collected for the analyses of oil and grease, cyanide, PCB's, and volatile organics. Total residual chlorine and pH were analyzed in the field. The flow was recorded from the flow meter totalizer.

Outfall 004: An automatic composite sampler was set up at Outfall 004 to collect an aliquot of the effluent wastewater every 15 minutes for 4 hours. The composite sample container was packed in ice. The 4-hour composite sample was analyzed for TSS, TDS, fluoride, and metals (aluminum, boron, iron, and zinc). A grab sample was also collected for the analyses of oil and grease, PCB's, cyanide, and volatile organics. Total residual chlorine, temperature, and pH were analyzed in the field. The flow was recorded from the flow meter totalizer.

Outfall 003: An automatic composite sampler was set up at Outfall 003 to collect an aliquot of the effluent wastewater every 15 minutes for 4 hours. The composite sample container was packed in ice. The 4-hour composite sample was analyzed for TSS, TDS, fluoride, and metals (aluminum, boron, iron, and zinc). A grab sample was also collected for the analyses

of oil and grease, and PCB's. Total residual chlorine, temperature, pH and settleable solids were analyzed in the field. The flow was recorded from the flow meter totalizer.

All sample containers, preservation techniques, and holding times were in accordance with US EPA requirements specified in 40 CFR Part 136. Samples were placed in a cooler with wet ice and transported to the EPA Region 2 Laboratory in Edison, New Jersey.

Flow data was obtained directly from Arconic instrumentation which was last calibrated in September 2018.

Split samples were collected and given to the facility representative.

4.2 Deviations and/or Environmental Conditions

Because of the shallow flow at Outfall 003, a peristaltic pump was used to fill the containers for the grab sample.

5.0 ANALYTICAL RESULTS

Arconic Inc. – Massena Operations

Outfall 01A

September 10, 2019

Parameter	Outfall 01A - Effluent	Permit Limit – Daily Maximum
pH (su)	7.58	6.0 – 9.0
Total Residual Chlorine (mg/l)	0.0	--
Flow (gpd)	823,800	Monitor
TSS (mg/l)	Not detected	20
TDS (mg/l)	290	Monitor
Fluoride (mg/l)	3.1	9.3
Oil and Grease (mg/l)	Not detected	10
Cyanide (ug/l)	Not detected	60
1,1-Dichloroethane (ug/l)	Not detected	20
Cis-1,2-Dichloroethene (ug/l)	Not detected	18
Benzo(a)pyrene (ng/l)	Not detected	90
Individual PAH's (ug/l)	Not detected	10
PCB's, total (ng/l)	Not detected	0.00010
Aroclor 1242 (ng/l)	Not detected	200
Aroclor 1248 (ng/l)	Not detected	200
Aroclor 1254 (ng/l)	Not detected	200
Aroclor 1260 (ng/l)	Not detected	200

Arconic Inc. – Massena Operations

Outfall 001

September 10, 2019

Parameter	Outfall 001 - Effluent	Permit Limit – Daily Maximum
pH (su)	8.23	6.5 – 9.0
Temperature (°F)	74	90
Total Residual Chlorine (mg/l)	0.0	--
Settleable Solids (ml/l)	0.0	0.1
Flow (gpd)	646,500	Monitor
TSS (mg/l)	Not detected	40
TDS (mg/l)	300	Monitor
Fluoride (mg/l)	1.5 (49 lbs/day)	240 lbs/day
Aluminum (ug/l)	145 (5 lbs/day)	43 lbs/day
Boron (ug/l)	25.9	130
Copper (ug/l)	Not detected	3.0 lbs/day
Iron (ug/l)	147 (5 lbs/day)	17 lbs/day
Nickel (ug/l)	Not detected	Monitor
Zinc (ug/l)	Not detected	1.7 lbs/day
Oil and Grease (mg/l)	Not detected	10
Cyanide (ug/l)	Not detected	60
Chloroform (ug/l)	Not detected	20
Dichlorobromomethane (ug/l)	Not detected	Monitor
2-Chloroethylvinyl ether (ug/l)	Not analyzed – see lab report	Monitor
Benzo(a)pyrene (ng/l)	Not detected	90
Individual PAH's (ug/l)	Not detected	10
PCB's, total (ng/l)	Not detected	0.00010
Aroclor 1242 (ng/l)	Not detected	200
Aroclor 1248 (ng/l)	Not detected	200
Aroclor 1254 (ng/l)	Not detected	200
Aroclor 1260 (ng/l)	Not detected	200

Arconic Inc. – Massena Operations
Outfall 003
September 11, 2019

Parameter	Outfall 003 - Effluent	Permit Limit – Daily Maximum
pH (su)	7.43	6.0 – 9.0
Temperature (°F)	66	90
Total Residual Chlorine (mg/l)	0.0	--
Settleable Solids (ml/l)	0.0	0.1
Flow (gpd)	191,400	Monitor
TSS (mg/l)	Not detected	20
TDS (mg/l)	590	Monitor
Fluoride (mg/l)	18 (29 lbs/day)	100 lbs/day
Aluminum (ug/l)	642	2000
Boron (ug/l)	28	420
Iron (ug/l)	118	1600
Zinc (ug/l)	Not detected	4 lbs/day
Oil and Grease (mg/l)	Not detected	10
PCB's, total (ng/l)	Not detected	0.00010
Aroclor 1242 (ng/l)	Not detected	200
Aroclor 1248 (ng/l)	Not detected	200
Aroclor 1254 (ng/l)	Not detected	200
Aroclor 1260 (ng/l)	Not detected	200

Arconic Inc. – Massena Operations

Outfall 004

September 11, 2019

Parameter	Outfall 004 - Effluent	Permit Limit – Daily Maximum
pH (su)	7.57	6.0 – 9.0
Temperature (°F)	68	90
Total Residual Chlorine (mg/l)	0.0	--
Flow (gpd)	1,736,520	Monitor
TSS (mg/l)	Not detected	20
TDS (mg/l)	250	Monitor
Fluoride (mg/l)	1.5 (22 lbs/day)	440 lbs/day
Aluminum (ug/l)	Not detected	4000
Boron (ug/l)	45.2	140
Iron (ug/l)	Not detected	15 lbs/day
Zinc (ug/l)	Not detected	5 lbs/day
Oil and Grease (mg/l)	Not detected	10
Cyanide (ug/l)	18	200
Chloroform (ug/l)	Not detected	20
Trichloroethene (ug/l)	Not detected	10
PCB's, total (ng/l)	Not detected	0.00010
Aroclor 1242 (ng/l)	Not detected	200
Aroclor 1248 (ng/l)	Not detected	200
Aroclor 1254 (ng/l)	Not detected	200
Aroclor 1260 (ng/l)	Not detected	200

6.0 FINDINGS

6.1 Sampling Result Findings

Based on the EPA analytical results for the samples that were collected on September 10-11, 2019, the discharges at Outfalls 01A, 001, 003, and 004 were found to be in compliance with the permit limitations for these four outfalls.

7.0 ATTACHMENTS

Photographs (#1 - #4)
Laboratory Data Report
Chain of Custody / Field Data Forms

PHOTO LOG

Photo #1: Outfall 01A.



Photo #2: Outfall 001.



Photo #3: Outfall 003.

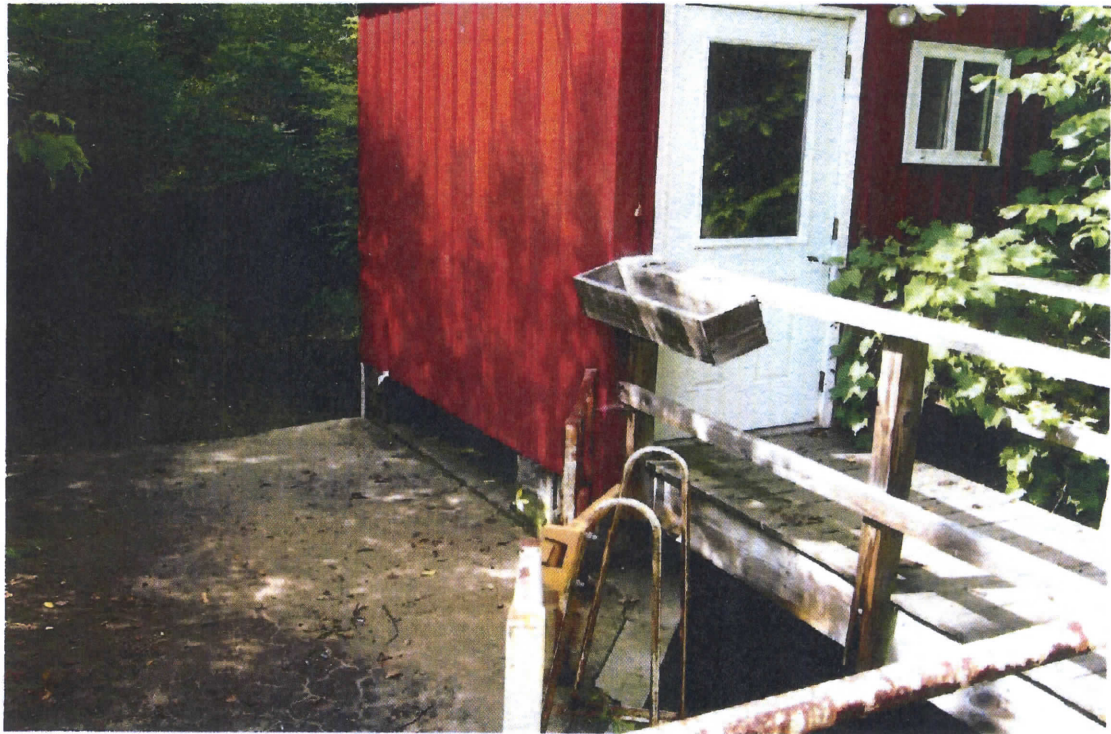


Photo #4: Outfall 004.





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

**Region 2 Laboratory
2890 Woodbridge Avenue
Edison , New Jersey 08837
732-906-6886 Phone
732-906-6165 Fax**

September 27, 2019

Philip Cocuzza
Monitoring & Assessment Branch
DESA/MAB
Edison, NJ 08837

RE: Arconic-Alcoa - 1909024

Enclosed are the results of analyses for samples received by the laboratory on 09/13/2019. The signature below reflects the laboratory's approval of the reported results. If you have any questions concerning this report, please refer to Project Number 1909024 and contact the laboratory.

Sincerely,

A handwritten signature in cursive script, reading "John R. Bourbon", is located below the "Sincerely," text.

John R. Bourbon
Chief, DESA/LB



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

Final Report

Project: Arconic-Alcoa - 1909024

Project Number: 1909024

Project Narrative:

The National Environmental Laboratory Accreditation Conference Institute (TNI) is a voluntary environmental laboratory accreditation association of State and Federal agencies. TNI established and promoted a National Environmental Laboratory Accreditation Program (NELAP) that provides a uniform set of standards for the generation of environmental data that are of known and defensible quality. The EPA Region 2 Laboratory is NELAP accredited. The Laboratory tests that are accredited have met all the requirements established under the TNI Standards.

Condition Comments

None

Comment(s):

The "Sample Analysis Date and Time" is included in the results section for any analyte with a prescribed holding time of 72 hours or less.

Data Qualifier(s):

- U- The analyte was not detected at or above the Reporting Limit.
- J- The identification of the analyte is acceptable; the reported value is an estimate.
- K- The identification of the analyte is acceptable; the reported value may be biased high.
- L- The identification of the analyte is acceptable; the reported value may be biased low.
- NJ- There is presumptive evidence that the analyte is present; the analyte is reported as a tentative identification. The reported value is an estimate.

Reporting Limit(s):

The Laboratory was able to achieve the appropriate limits for each analyte requested.

Semi-Volatile Organic Compounds : The initial Calibration point of 2,4-Dinitrophenol was dropped and the appropriate Reporting Limits (RL) was raised accordingly on all samples.

VOAs: The VOAs reported are those listed in EPA Method 624.1 and those listed on the Total Toxic Organic List with the exception of Acrolein and 2-Chloroethyl Vinyl Ether. These two compounds are very unstable in water

U.S.E.P.A Region 2 Laboratory

NOTE: The results recorded in this report relate only to the samples as received on the date and at the time noted
Reported: 9/27/2019



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

Final Report

Project: Arconic-Alcoa - 1909024

Project Number: 1909024

and, based on our studies, we have experienced unacceptable performance, i.e., extremely low recovery of fortified samples. These two compounds are not reported. Additional compound- Cis-1,2-Dichloroethene was requested and reported in the Final Report.

SUMMARY REPORT FOR SAMPLES

Field ID	Laboratory ID	Matrix	Date Sampled	Date Received
Outfall 001-Grab Comp.	1909024-01	Aqueous	09/10/2019 13:33	09/13/2019 09:00
Outfall 001-4.Hr. Comp.	1909024-02	Aqueous	09/10/2019 13:13	09/13/2019 09:00
Outfall 001-Grab	1909024-03	Aqueous	09/10/2019 15:19	09/13/2019 09:00
Outfall 01A-4.Hr. Comp.	1909024-04	Aqueous	09/10/2019 14:35	09/13/2019 09:00
Outfall 01A-Grab Comp.	1909024-05	Aqueous	09/10/2019 14:25	09/13/2019 09:00
Outfall 01A-Grab	1909024-06	Aqueous	09/10/2019 11:43	09/13/2019 09:00
Outfall 003-4.Hr. Comp.	1909024-07	Aqueous	09/11/2019 12:57	09/13/2019 09:00
Outfall 003-Grab	1909024-08	Aqueous	09/11/2019 11:13	09/13/2019 09:00
Outfall 004-Grab	1909024-09	Aqueous	09/11/2019 10:02	09/13/2019 09:00
Outfall 004-4.Hr. Comp.	1909024-10	Aqueous	09/11/2019 12:25	09/13/2019 09:00
Trip Blank	1909024-11	Aqueous	09/10/2019 11:15	09/13/2019 09:00



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

Final Report

Project: Arconic-Alcoa - 1909024

Project Number: 1909024

SUMMARY REPORT FOR METHODS

Analysis	Method	Certification	Matrix
608.3 PCB Aroclors NPDES	EPA 608.3 SOP C-91 Rev 4.2	NELAP	Aqueous
624.1 VOA EPA-NPDES	EPA 624.1 SOP C-89 Rev 3.5	NELAP	Aqueous
625.1 SVOA NPDES	EPA 625.1 SOP C-90 Rev 3.7	NELAP	Aqueous
Cyanide, Total	EPA 335.4 SOP C-28 Rev 2.6	NELAP	Aqueous
Fluoride	EPA 300.0 SOP C-94 Rev 2.6	NELAP	Aqueous
Metals ICP TAL NPDES/DW	EPA 200.7 SOP C-109 Rev 3.5	NELAP	Aqueous
Oil & Grease	EPA 1664A SOP C-126 Rev 1.5	NELAP	Aqueous
Residue, Filterable	SM 2540C SOP C-37 Rev 2.6	NELAP	Aqueous
Residue, Non-Filterable	SM 2540D SOP C-33 Rev 3.6	NELAP	Aqueous



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

Final Report

Project: Arconic-Alcoa - 1909024

Project Number: 1909024

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
---------	--------	-----------	-----------------	-------	----------------------------

Field ID: Outfall 001-Grab Comp.

Sample ID: 1909024-01

NVOA GCMS

Acenaphthene	---	U	5.68	ug/L
Acenaphthylene	---	U	5.68	ug/L
Anthracene	---	U	5.68	ug/L
Benzo(A)Anthracene	---	U	5.68	ug/L
Benzo(A)Pyrene	---	U	5.68	ug/L
Benzo(B)Fluoranthene	---	U	5.68	ug/L
Benzo(G,H,I)Perylene	---	U	5.68	ug/L
Benzo(K)Fluoranthene	---	U	5.68	ug/L
Chrysene	---	U	5.68	ug/L
Dibenzo(A,H)Anthracene	---	U	5.68	ug/L
Fluoranthene	---	U	5.68	ug/L
Fluorene	---	U	5.68	ug/L
Indeno(1,2,3-Cd)Pyrene	---	U	5.68	ug/L
Naphthalene	---	U	2.27	ug/L
Phenanthrene	---	U	5.68	ug/L
1,2,4-Trichlorobenzene	---	U	5.68	ug/L
2,4,6-Trichlorophenol	---	U L	5.68	ug/L
2,4-Dichlorophenol	---	U L	5.68	ug/L
2,4-Dimethylphenol	---	U L	5.68	ug/L
2,4-Dinitrotoluene	---	U	5.68	ug/L
2,6-Dinitrotoluene	---	U	5.68	ug/L
2,4-Dinitrophenol	---	U	11.4	ug/L
2-Chloronaphthalene	---	U	5.68	ug/L
2-Chlorophenol	---	U L	5.68	ug/L
2-Nitrophenol	---	U L	5.68	ug/L
3,3'- Dichlorobenzidine	---	U	5.68	ug/L
4,6-Dinitro-2-Methylphenol	---	U	5.68	ug/L
4-Bromophenyl-Phenylether	---	U	5.68	ug/L



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

Final Report

Project: Arconic-Alcoa - 1909024

Project Number: 1909024

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
---------	--------	-----------	-----------------	-------	----------------------------

Field ID: Outfall 001-Grab Comp.

Sample ID: 1909024-01

NVOA GCMS

4-Chloro-3-Methylphenol	---	U L	5.68	ug/L
4-Chlorophenyl-Phenylether	---	U	5.68	ug/L
4-Nitrophenol	---	U	5.68	ug/L
Bis(-2-Chloroethoxy)Methane	---	U	5.68	ug/L
Bis(2-Chloroethyl)Ether	---	U	5.68	ug/L
Bis(2-Chloroisopropyl)Ether	---	U	5.68	ug/L
Bis(2-Ethylhexyl)Phthalate	---	U	5.68	ug/L
Butylbenzylphthalate	---	U	5.68	ug/L
Azobenzene	---	U	5.68	ug/L
Diethylphthalate	---	U	5.68	ug/L
Dimethyl Phthalate	---	U	2.27	ug/L
Di-N-Butyl Phthalate	---	U	5.68	ug/L
Di-N-Octyl Phthalate	---	U	5.68	ug/L
Hexachlorobenzene	---	U	5.68	ug/L
Hexachlorobutadiene	---	U	2.27	ug/L
Hexachlorocyclopentadiene	---	U	5.68	ug/L
Hexachloroethane	---	U	2.27	ug/L
Isophorone	---	U	5.68	ug/L
Nitrobenzene	---	U	5.68	ug/L
N-Nitrosodimethylamine	---	U	5.68	ug/L
N-Nitroso-Di-N-Propylamine	---	U	5.68	ug/L
N-Nitrosodiphenylamine	---	U	5.68	ug/L
Pentachlorophenol	---	U	5.68	ug/L
Phenol	---	U L	2.27	ug/L
Pyrene	---	U	5.68	ug/L

Field ID: Outfall 001-4.Hr. Comp.

Sample ID: 1909024-02

Metals ICP

Aluminum	145	100	ug/L
----------	-----	-----	------



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

Final Report

Project: Arconic-Alcoa - 1909024

Project Number: 1909024

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
---------	--------	-----------	-----------------	-------	----------------------------

Field ID: Outfall 001-4.Hr. Comp.

Sample ID: 1909024-02

Metals ICP

Boron	25.9		10.0	ug/L
Copper	---	U	10.0	ug/L
Iron	147		50.0	ug/L
Nickel	---	U	20.0	ug/L
Zinc	---	U	20.0	ug/L

Sanitary

Fluoride	1.5		0.050	mg/L
Residue, Filterable	300		10	mg/L
Residue, Non-Filterable	---	U	10	mg/L

Field ID: Outfall 001-Grab

Sample ID: 1909024-03

VOA GCMS

Chloromethane	---	U	5.00	ug/L
Vinyl Chloride	---	U	5.00	ug/L
Bromomethane	---	U	5.00	ug/L
Chloroethane	---	U	5.00	ug/L
Trichlorofluoromethane	---	U	5.00	ug/L
1,1-Dichloroethene	---	U	5.00	ug/L
Methylene Chloride	---	U	5.00	ug/L
Acrylonitrile	---	U	5.00	ug/L
trans-1,2-Dichloroethene	---	U	5.00	ug/L
1,1-Dichloroethane	---	U	5.00	ug/L
Chloroform	---	U	5.00	ug/L
1,1,1-Trichloroethane	---	U	5.00	ug/L
Carbon Tetrachloride	---	U	5.00	ug/L
1,2-Dichloroethane	---	U	5.00	ug/L
Benzene	---	U	5.00	ug/L
cis-1,2-Dichloroethene	---	U	5.00	ug/L



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

Final Report

Project: Arconic-Alcoa - 1909024

Project Number: 1909024

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
---------	--------	-----------	-----------------	-------	----------------------------

Field ID: Outfall 001-Grab

Sample ID: 1909024-03

VOA GCMS

Trichloroethene	---	U	5.00	ug/L
1,2-Dichloropropane	---	U	5.00	ug/L
Bromodichloromethane	---	U	5.00	ug/L
cis-1,3-Dichloropropene	---	U	5.00	ug/L
Toluene	---	U	5.00	ug/L
trans-1,3-Dichloropropene	---	U	5.00	ug/L
1,1,2-Trichloroethane	---	U	5.00	ug/L
Tetrachloroethene	---	U	5.00	ug/L
Dibromochloromethane	---	U	5.00	ug/L
Chlorobenzene	---	U	5.00	ug/L
Ethylbenzene	---	U	5.00	ug/L
Bromoform	---	U	5.00	ug/L
1,1,2,2-Tetrachloroethane	---	U	5.00	ug/L
1,3-Dichlorobenzene	---	U	5.00	ug/L
1,4-Dichlorobenzene	---	U	5.00	ug/L
1,2-Dichlorobenzene	---	U	5.00	ug/L

PCB Aroclors GC

Aroclor 1016	---	U	0.033	ug/L
Aroclor 1221	---	U	0.066	ug/L
Aroclor 1232	---	U	0.033	ug/L
Aroclor 1242	---	U	0.033	ug/L
Aroclor 1248	---	U	0.033	ug/L
Aroclor 1254	---	U	0.033	ug/L
Aroclor 1260	---	U	0.033	ug/L



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

Final Report

Project: Arconic-Alcoa - 1909024

Project Number: 1909024

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
---------	--------	-----------	-----------------	-------	----------------------------

Field ID: Outfall 001-Grab

Sample ID: 1909024-03

GC - Sanitary

Oil & Grease

--- U 5.9 mg/L

Sanitary

Cyanide, Total

--- U 10 ug/L

Field ID: Outfall 01A-4.Hr. Comp.

Sample ID: 1909024-04

Sanitary

Fluoride

3.1 0.050 mg/L

Residue, Filterable

290 10 mg/L

Residue, Non-Filterable

--- U 10 mg/L

Field ID: Outfall 01A-Grab Comp.

Sample ID: 1909024-05

NVOA GCMS

Acenaphthene

--- U 5.62 ug/L

Acenaphthylene

--- U 5.62 ug/L

Anthracene

--- U 5.62 ug/L

Benzo(A)Anthracene

--- U 5.62 ug/L

Benzo(A)Pyrene

--- U 5.62 ug/L

Benzo(B)Fluoranthene

--- U 5.62 ug/L

Benzo(G,H,I)Perylene

--- U 5.62 ug/L

Benzo(K)Fluoranthene

--- U 5.62 ug/L

Chrysene

--- U 5.62 ug/L

Dibenzo(A,H)Anthracene

--- U 5.62 ug/L

Fluoranthene

--- U 5.62 ug/L

Fluorene

--- U 5.62 ug/L

Indeno(1,2,3-Cd)Pyrene

--- U 5.62 ug/L

Naphthalene

--- U 2.25 ug/L

Phenanthrene

--- U 5.62 ug/L

1,2,4-Trichlorobenzene

--- U 5.62 ug/L

2,4,6-Trichlorophenol

--- U L 5.62 ug/L



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

Final Report
Project: Arconic-Alcoa - 1909024
Project Number: 1909024

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
---------	--------	-----------	-----------------	-------	----------------------------

Field ID: Outfall 01A-Grab Comp.

Sample ID: 1909024-05

NVOA GCMS

2,4-Dichlorophenol	---	U L	5.62	ug/L
2,4-Dimethylphenol	---	U L	5.62	ug/L
2,4-Dinitrotoluene	---	U	5.62	ug/L
2,6-Dinitrotoluene	---	U	5.62	ug/L
2,4-Dinitrophenol	---	U	11.2	ug/L
2-Chloronaphthalene	---	U	5.62	ug/L
2-Chlorophenol	---	U L	5.62	ug/L
2-Nitrophenol	---	U L	5.62	ug/L
3,3'- Dichlorobenzidine	---	U	5.62	ug/L
4,6-Dinitro-2-Methylphenol	---	U	5.62	ug/L
4-Bromophenyl-Phenylether	---	U	5.62	ug/L
4-Chloro-3-Methylphenol	---	U L	5.62	ug/L
4-Chlorophenyl-Phenylether	---	U	5.62	ug/L
4-Nitrophenol	---	U	5.62	ug/L
Bis(-2-Chloroethoxy)Methane	---	U	5.62	ug/L
Bis(2-Chloroethyl)Ether	---	U	5.62	ug/L
Bis(2-Chloroisopropyl)Ether	---	U	5.62	ug/L
Bis(2-Ethylhexyl)Phthalate	---	U	5.62	ug/L
Butylbenzylphthalate	---	U	5.62	ug/L
Azobenzene	---	U	5.62	ug/L
Diethylphthalate	---	U	5.62	ug/L
Dimethyl Phthalate	---	U	2.25	ug/L
Di-N-Butyl Phthalate	---	U	5.62	ug/L
Di-N-Octyl Phthalate	---	U	5.62	ug/L
Hexachlorobenzene	---	U	5.62	ug/L
Hexachlorobutadiene	---	U	2.25	ug/L
Hexachlorocyclopentadiene	---	U	5.62	ug/L
Hexachloroethane	---	U	2.25	ug/L



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

Final Report

Project: Arconic-Alcoa - 1909024

Project Number: 1909024

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
---------	--------	-----------	-----------------	-------	----------------------------

Field ID: Outfall 01A-Grab Comp.

Sample ID: 1909024-05

NVOA GCMS

Isophorone	---	U	5.62	ug/L	
Nitrobenzene	---	U	5.62	ug/L	
N-Nitrosodimethylamine	---	U	5.62	ug/L	
N-Nitroso-Di-N-Propylamine	---	U	5.62	ug/L	
N-Nitrosodiphenylamine	---	U	5.62	ug/L	
Pentachlorophenol	---	U	5.62	ug/L	
Phenol	---	U L	2.25	ug/L	
Pyrene	---	U	5.62	ug/L	

Field ID: Outfall 01A-Grab

Sample ID: 1909024-06

VOA GCMS

Chloromethane	---	U	5.00	ug/L	
Vinyl Chloride	---	U	5.00	ug/L	
Bromomethane	---	U	5.00	ug/L	
Chloroethane	---	U	5.00	ug/L	
Trichlorofluoromethane	---	U	5.00	ug/L	
1,1-Dichloroethene	---	U	5.00	ug/L	
Methylene Chloride	---	U	5.00	ug/L	
Acrylonitrile	---	U	5.00	ug/L	
trans-1,2-Dichloroethene	---	U	5.00	ug/L	
1,1-Dichloroethane	---	U	5.00	ug/L	
Chloroform	---	U	5.00	ug/L	
1,1,1-Trichloroethane	---	U	5.00	ug/L	
Carbon Tetrachloride	---	U	5.00	ug/L	
1,2-Dichloroethane	---	U	5.00	ug/L	
Benzene	---	U	5.00	ug/L	
cis-1,2-Dichloroethene	---	U	5.00	ug/L	
Trichloroethene	---	U	5.00	ug/L	
1,2-Dichloropropane	---	U	5.00	ug/L	



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

Final Report

Project: Arconic-Alcoa - 1909024

Project Number: 1909024

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
---------	--------	-----------	-----------------	-------	----------------------------

Field ID: Outfall 01A-Grab

Sample ID: 1909024-06

VOA GCMS

Bromodichloromethane	---	U	5.00	ug/L
cis-1,3-Dichloropropene	---	U	5.00	ug/L
Toluene	---	U	5.00	ug/L
trans-1,3-Dichloropropene	---	U	5.00	ug/L
1,1,2-Trichloroethane	---	U	5.00	ug/L
Tetrachloroethene	---	U	5.00	ug/L
Dibromochloromethane	---	U	5.00	ug/L
Chlorobenzene	---	U	5.00	ug/L
Ethylbenzene	---	U	5.00	ug/L
Bromoform	---	U	5.00	ug/L
1,1,2,2-Tetrachloroethane	---	U	5.00	ug/L
1,3-Dichlorobenzene	---	U	5.00	ug/L
1,4-Dichlorobenzene	---	U	5.00	ug/L
1,2-Dichlorobenzene	---	U	5.00	ug/L

PCB Aroclors GC

Aroclor 1016	---	U	0.035	ug/L
Aroclor 1221	---	U	0.069	ug/L
Aroclor 1232	---	U	0.035	ug/L
Aroclor 1242	---	U	0.035	ug/L
Aroclor 1248	---	U	0.035	ug/L
Aroclor 1254	---	U	0.035	ug/L
Aroclor 1260	---	U	0.035	ug/L

GC - Sanitary

Oil & Grease	---	U	6.0	mg/L
--------------	-----	---	-----	------



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 2 Laboratory

Final Report

Project: Arconic-Alcoa - 1909024

Project Number: 1909024

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
---------	--------	-----------	-----------------	-------	----------------------------

Field ID: Outfall 01A-Grab

Sample ID: 1909024-06

Sanitary

Cyanide, Total	---	U	10	ug/L
----------------	-----	---	----	------

Field ID: Outfall 003-4.Hr. Comp.

Sample ID: 1909024-07

Metals ICP

Aluminum	642		100	ug/L
----------	-----	--	-----	------

Boron	28.0		10.0	ug/L
-------	------	--	------	------

Iron	118		50.0	ug/L
------	-----	--	------	------

Zinc	---	U	20.0	ug/L
------	-----	---	------	------

Sanitary

Fluoride	18		0.50	mg/L
----------	----	--	------	------

Residue, Filterable	590		10	mg/L
---------------------	-----	--	----	------

Residue, Non-Filterable	---	U	10	mg/L
-------------------------	-----	---	----	------

Field ID: Outfall 003-Grab

Sample ID: 1909024-08

PCB Aroclors GC

Aroclor 1016	---	U	0.038	ug/L
--------------	-----	---	-------	------

Aroclor 1221	---	U	0.075	ug/L
--------------	-----	---	-------	------

Aroclor 1232	---	U	0.038	ug/L
--------------	-----	---	-------	------

Aroclor 1242	---	U	0.038	ug/L
--------------	-----	---	-------	------

Aroclor 1248	---	U	0.038	ug/L
--------------	-----	---	-------	------

Aroclor 1254	---	U	0.038	ug/L
--------------	-----	---	-------	------

Aroclor 1260	---	U	0.038	ug/L
--------------	-----	---	-------	------

GC - Sanitary

Oil & Grease	---	U	5.8	mg/L
--------------	-----	---	-----	------

Field ID: Outfall 004-Grab

Sample ID: 1909024-09

VOA GCMS

Chloromethane	---	U	5.00	ug/L
---------------	-----	---	------	------

Vinyl Chloride	---	U	5.00	ug/L
----------------	-----	---	------	------



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

Final Report
Project: Arconic-Alcoa - 1909024
Project Number: 1909024

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
---------	--------	-----------	-----------------	-------	----------------------------

Field ID: Outfall 004-Grab

Sample ID: 1909024-09

VOA GCMS

Bromomethane	---	U	5.00	ug/L
Chloroethane	---	U	5.00	ug/L
Trichlorofluoromethane	---	U	5.00	ug/L
1,1-Dichloroethene	---	U	5.00	ug/L
Methylene Chloride	---	U	5.00	ug/L
Acrylonitrile	---	U	5.00	ug/L
trans-1,2-Dichloroethene	---	U	5.00	ug/L
1,1-Dichloroethane	---	U	5.00	ug/L
Chloroform	---	U	5.00	ug/L
1,1,1-Trichloroethane	---	U	5.00	ug/L
Carbon Tetrachloride	---	U	5.00	ug/L
1,2-Dichloroethane	---	U	5.00	ug/L
Benzene	---	U	5.00	ug/L
cis-1,2-Dichloroethene	---	U	5.00	ug/L
Trichloroethene	---	U	5.00	ug/L
1,2-Dichloropropane	---	U	5.00	ug/L
Bromodichloromethane	---	U	5.00	ug/L
cis-1,3-Dichloropropene	---	U	5.00	ug/L
Toluene	---	U	5.00	ug/L
trans-1,3-Dichloropropene	---	U	5.00	ug/L
1,1,2-Trichloroethane	---	U	5.00	ug/L
Tetrachloroethene	---	U	5.00	ug/L
Dibromochloromethane	---	U	5.00	ug/L
Chlorobenzene	---	U	5.00	ug/L
Ethylbenzene	---	U	5.00	ug/L
Bromoform	---	U	5.00	ug/L
1,1,2,2-Tetrachloroethane	---	U	5.00	ug/L
1,3-Dichlorobenzene	---	U	5.00	ug/L



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

Final Report

Project: Arconic-Alcoa - 1909024

Project Number: 1909024

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
---------	--------	-----------	-----------------	-------	----------------------------

Field ID: Outfall 004-Grab

Sample ID: 1909024-09

VOA GCMS

1,4-Dichlorobenzene	---	U	5.00	ug/L	
1,2-Dichlorobenzene	---	U	5.00	ug/L	

PCB Aroclors GC

Aroclor 1016	---	U	0.034	ug/L	
Aroclor 1221	---	U	0.069	ug/L	
Aroclor 1232	---	U	0.034	ug/L	
Aroclor 1242	---	U	0.034	ug/L	
Aroclor 1248	---	U	0.034	ug/L	
Aroclor 1254	---	U	0.034	ug/L	
Aroclor 1260	---	U	0.034	ug/L	

GC - Sanitary

Oil & Grease	---	U	6.3	mg/L	
--------------	-----	---	-----	------	--

Sanitary

Cyanide, Total	18		10	ug/L	
----------------	----	--	----	------	--

Field ID: Outfall 004-4.Hr. Comp.

Sample ID: 1909024-10

Metals ICP

Aluminum	---	U	100	ug/L	
Boron	45.2		10.0	ug/L	
Iron	---	U	50.0	ug/L	
Zinc	---	U	20.0	ug/L	

Sanitary

Fluoride	1.5		0.050	mg/L	
Residue, Filterable	250		10	mg/L	
Residue, Non-Filterable	---	U	10	mg/L	

Field ID: Trip Blank

Sample ID: 1909024-11

VOA GCMS

Chloromethane	---	U	5.00	ug/L	
---------------	-----	---	------	------	--



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

Final Report

Project: Arconic-Alcoa - 1909024

Project Number: 1909024

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
---------	--------	-----------	-----------------	-------	----------------------------

Field ID: Trip Blank

Sample ID: 1909024-11

VOA GCMS

Vinyl Chloride	---	U	5.00	ug/L
Bromomethane	---	U	5.00	ug/L
Chloroethane	---	U	5.00	ug/L
Trichlorofluoromethane	---	U	5.00	ug/L
1,1-Dichloroethene	---	U	5.00	ug/L
Methylene Chloride	---	U	5.00	ug/L
Acrylonitrile	---	U	5.00	ug/L
trans-1,2-Dichloroethene	---	U	5.00	ug/L
1,1-Dichloroethane	---	U	5.00	ug/L
Chloroform	---	U	5.00	ug/L
1,1,1-Trichloroethane	---	U	5.00	ug/L
Carbon Tetrachloride	---	U	5.00	ug/L
1,2-Dichloroethane	---	U	5.00	ug/L
Benzene	---	U	5.00	ug/L
cis-1,2-Dichloroethene	---	U	5.00	ug/L
Trichloroethene	---	U	5.00	ug/L
1,2-Dichloropropane	---	U	5.00	ug/L
Bromodichloromethane	---	U	5.00	ug/L
cis-1,3-Dichloropropene	---	U	5.00	ug/L
Toluene	---	U	5.00	ug/L
trans-1,3-Dichloropropene	---	U	5.00	ug/L
1,1,2-Trichloroethane	---	U	5.00	ug/L
Tetrachloroethene	---	U	5.00	ug/L
Dibromochloromethane	---	U	5.00	ug/L
Chlorobenzene	---	U	5.00	ug/L
Ethylbenzene	---	U	5.00	ug/L
Bromoform	---	U	5.00	ug/L
1,1,2,2-Tetrachloroethane	---	U	5.00	ug/L



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

Final Report

Project: Arconic-Alcoa - 1909024

Project Number: 1909024

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
---------	--------	-----------	-----------------	-------	----------------------------

Field ID: Trip Blank

Sample ID: 1909024-11

VOA GCMS

1,3-Dichlorobenzene	---	U	5.00	ug/L	
1,4-Dichlorobenzene	---	U	5.00	ug/L	
1,2-Dichlorobenzene	---	U	5.00	ug/L	

US EPA REGION 2 LABORATORY CHAIN OF CUSTODY/ FIELD DATA FORM

Page ____ of ____ pages

SURVEY NAME & LOCALITY _____

PROGRAM: SF ☐ :

Decision

Unit Code

RCRA ☐

D210

RCRA ENF ☐

D307

SITE ID _____

NPDES ☐

B304

SDWA ☐

C215

AM ☐

B224

CAA ☐

A305

PROJECT LEADER _____

PROGRAM RESULTS CODE _____

TSCA ☐

OD ☐

FIFRA ☐

CRIMINAL ENF ☐

B253

Permit #:

OF

CONTAINERS

CHECK IF

SPLIT

SAMPLE

DESCRIPTION & INSTRUCTIONS INCLUDING LOCATION, ESTIMATED CONCENTRATIONS, SPECIAL REPORTING LIMITS.

Res CL

Checked

Preservative

(circle)

Collection Time

(24hr clock)

Begin

End

Collection Date

mm/dd/yy

LAB ID/ FIELD ID

012345678910

012345678910

012345678910

012345678910

012345678910

012345678910

012345678910

012345678910

012345678910

012345678910

012345678910

COMMENTS & SPECIAL REQUIREMENTS:

Preservative Added & Checked

0=ice

7=FAS

1=H2SO4 pH<2

8=ZnAc

2=HNO3 pH<2

9=NaOH pH>12

3=HCl pH<2

10=NH4Cl

4=Na2S2O3

5=NaOH pH>9

6=Ascorbic Acid

Matrix:

A=aqueous

B=aqueous (chlorinated)

C=soil

D=sludge

F=multiphaseic

G=solvent

H=biota

I=oil

J=other

Relinquished By

Received By

Relinquished By

Received By

Relinquished By

Received By

Relinquished By

Received By

Relinquished By

Received By

Relinquished By

Received By

Relinquished By

Received By

Relinquished By

Survey Complete? Y ☐ N ☐

**US EPA REGION 2 LABORATORY
CHAIN OF CUSTODY/ FIELD DATA FORM**

Page ____ of ____ pages

SURVEY NAME & LOCALITY _____ PROJECT LEADER _____

PROGRAM: SF ☐ : _____ PROGRAM RESULTS CODE _____

Decision _____ RCRA ☐ RCRA ENF ☐ NPDES ☐ SDWA ☐ AM ☐ CAA ☐ TSCA ☐ OD ☐ FIFRA ☐ CRIMINAL ENF ☐

Unit Code Y206 _____ B304 C215 B224 A305 L306 B253

Permit #: _____

LAB ID/ FIELD ID _____

DESCRIPTION & INSTRUCTIONS INCLUDING LOCATION, ESTIMATED CONCENTRATIONS, SPECIAL REPORTING LIMITS, _____

CHECK IF _____

MATRIX _____

OF _____

CONTAINERS _____

Preservative (circle) _____

Res CL Checked _____

Collection Time (24hr clock) Begin End _____

Collection Date mm/dd/yy _____

COMMENTS & SPECIAL REQUIREMENTS _____

Preservative Added & Checked

0=ice 7=FAS

1=H2SO4 pH<2 8=ZnAc

2=HNO3 pH<2 9=NaOH pH>12

3=HCl pH<2 10=NH4Cl

4=Na2S2O3

5=NaOH pH>9

6=Ascorbic Acid

Time _____ Date _____

Person Assuming Responsibility for Sample(s) _____

Received By _____

Relinquished By _____

Received By _____

Relinquished By _____

Received By _____

Relinquished By _____

Survey Complete? Y ☐ N ☐